

State of Rhode Island and Providence Plantations Contract Offer
RIVIP BIDDER CERTIFICATION COVER FORM

SECTION 1 - VENDOR INFORMATION

Bid/RFPNumber: 7538372
Bid/RFP Title: FUME HOOD EVALUTION, CERTIFICATION AND REPAIR - URI (46 PGS)

Opening Date & Time: 2/11/2014 10:00 AM

RIVIP Vendor ID #: 15257

Vendor Name: H.J. Astle Company
Address: 101 Pershing Street
East Providence , RI 02914
USA

Telephone: 4014386700
Fax: 4014387322
E-Mail: jim@hjastle.com
Contact Person: James Hutchinson
Title: President
R.I. Foreign Corp #:

NOTICE TO VENDORS

Each bid proposal for a *public works project* must include a "public copy" to be available for public inspection upon the opening of bids. **Bid proposals that do not include a copy for public inspection will be deemed nonresponsive.** For further information on how to comply with this statutory requirement, see R. I. Gen. Laws §§ 37-2-18(b) and (j). Also see Procurement Regulation 5.11, and in addition, for highway and bridge projects, also see Procurement Regulation 5.13, accessible at www.purchasing.ri.gov.

NOTE: AWARD OF CONTRACTS AND PURCHASE ORDERS SHALL BE SUBJECT, AT THE DISCRETION OF THE PURCHASING AGENT, TO THE OFFEROR COMPLETING AN ON-LINE RIVIP REGISTRATION at www.purchasing.ri.gov. It is THE RESPONSIBILITY OF THE VENDOR to make on-line corrections/updates using the Vendor maintenance program on the RI Division of Purchases Web Site.

SECTION 2 – REQUIREMENTS

ALL OFFERS ARE SUBJECT TO THE REQUIREMENTS, PROVISIONS AND PROCEDURES CONTAINED IN THIS CERTIFICATION FORM. Offerors are expected to READ, SIGN and COMPLY WITH all requirements. Failure to do so may be grounds for disqualification of the offer contained herein.

Section 2.1 - RULES FOR SUBMITTING OFFERS

2.1A. This CERTIFICATION FORM MUST BE ATTACHED IN ITS ENTIRETY TO THE FRONT OF THE OFFER and shall be considered an integral part of each offer made by a vendor to enter into a contract with the State of Rhode Island, Division of Purchases. As such, submittal of the entire Bidder Certification Cover Form, signed by a duly authorized representative of the offeror attesting that he/she (1) has read and agrees to comply with the requirements set forth herein and (2) to the accuracy of the information provided and the offer extended, is a mandatory part of any contract award.

To assure that offers are considered on time, each offer must be submitted with the specific Bid/RFP/LOI number (provided above) and the date and time of opening marked in the upper left hand corner of envelope. Each bid/offer must be submitted in separate sealed envelopes.

A complete, signed (in ink) offer package must be delivered to the Division of Purchases (via any mail or messenger service) by the time and date specified for the opening of responses in a sealed envelope.

Bids must be submitted on the RI bid solicitation forms provided, indicating brand and part numbers of items offered, as appropriate. Bidders must submit detailed cuts and specs on items offered as equivalent to brands requested WITH THE OFFER. Bidders must be able to submit samples if requested. Mail To: Division of Purchases, One Capitol Hill, Second Floor, Providence, RI 02908-5855.

Documents misdirected to other State locations or which are not present in the Division of Purchases at the time of opening for whatever cause will be deemed to be late and will not be considered. For the purposes of this requirement, the official time and date shall be that of the time clock in the Division of Purchases. Postmarks shall not be considered proof of timely submission.

2.1B. RIVIP SOLICITATIONS. To assure maximum access opportunities for users, public bid/RFP solicitations shall be posted on the RIVIP for a minimum of seven days and no amendments shall be made within the last five days before the date an offer is due. Except when access to the Web Site has been severely curtailed and it is determined by the State Purchasing Agent that special circumstances preclude extending a solicitation due date, requests to mail or fax hard copies of solicitations will not be honored. When the result of an Internet solicitation is unsuccessful, the State of Rhode Island will cancel the original solicitation and resolicit the original offer directly from vendors.

2.2. PRICING. Offers are irrevocable for sixty (60) days from the opening date (or such other extended period set forth in the solicitation) and may not be withdrawn, except with the express permission of the State Purchasing Agent. All pricing will be considered to be firm and fixed unless otherwise indicated. The State of Rhode Island is exempt from Federal excise taxes and State Sales and Use Taxes. Such taxes shall not be included in the bid price. PRICES QUOTED ARE FOB DESTINATION.

2.3. DELIVERY and PRODUCT QUALITY. All offers must define delivery dates for all items; if no delivery date is specified, it is assumed that immediate delivery from stock will be made. The contractor will be responsible for delivery of materials in first class condition. Rejected materials will be at vendor's expense.

2.4. PREVAILING WAGE, OSHA SAFETY TRAINING, and APPRENTICESHIP REQUIREMENTS.

Bidders must comply with the provisions of the Rhode Island labor laws, including R. I. Gen. Laws §§ 37-13-1 *et seq.* and occupational safety laws, including R. I. Gen. Laws §§ 28-20-1 *et seq.* These laws mandate for public works construction projects the payment of prevailing wage rates, the implementation and maintenance of occupational safety standards, and for projects with a minimum value of \$1 Million, the employment of apprentices. The successful Bidder must submit certifications of compliance with these laws from each of its subcontractors prior to their commencement of any work. Prevailing wage rates, apprenticeship requirements, and other workforce and safety regulations are accessible at www.dlt.ri.gov.

2.5. PUBLIC RECORDS. Offerors are advised that all materials submitted to the State for consideration in response to this solicitation will be considered without exception to be Public Records pursuant to Title 38 Chapter 2 of the Rhode Island General Laws, and will be released for inspection immediately upon request once an award has been made. Offerors are encouraged to attend public bid/RFP openings to obtain information; however, bid/RFP response summaries may be reviewed after award(s) have been made by using the RIVIP at any time or appearing in person at the Division of Purchases Mondays through Fridays between 8:30 a.m. and 3:30 p.m. Telephone requests for results will not be honored. Written requests for results will only be honored if the information is not available on the RIVIP.

SECTION 3 - AWARD DETERMINATION

Award will be made to the responsive and responsible offeror quoting the lowest net price in accordance with specifications, for any individual item(s), for major groupings of items, or for all items listed, at the State's sole option.

3.1. BID SURETY. Where bid surety is required, bidder must furnish a bid bond or certified check for 5% of the bid total with the bid, or for such other amount as may be specified. Bids submitted without a required bid surety will not be considered.

3.2. SPECIFICATIONS. Unless specified "no substitute," product offerings equivalent in quality and performance will be considered (at the sole option of the State) on the condition that the offer is accompanied by detailed product specifications. Offers which fail to include alternate specifications may be deemed nonresponsive.

SECTION 4 – CONTRACT PROVISIONS

4.1. VENDOR AUTHORIZATION TO PROCEED.

4.1A. When a purchase order, change order, contract/agreement or contract/agreement amendment is issued by the RI Division of Purchases, no claim for payment for services rendered or goods delivered contrary to or in excess of the contract terms and scope shall be considered valid unless the vendor has obtained a written change order or contract amendment issued by the Division of Purchases PRIOR TO delivery.

4.1B. Any offer, whether in response to a solicitation for proposals or bids, or made without a solicitation, which is accepted in the form of an order OR Pricing Agreement made in writing by the Purchasing Agent, or a state official with purchasing authority delegated by the Purchasing Agent, shall be considered a binding contract.

4.2. REGULATIONS, GENERAL TERMS AND CONDITIONS GOVERNING STATE CONTRACTS. This solicitation and any contract or purchase order arising from it are issued in accordance with the specific requirements described herein, and the State's Purchasing Laws and Regulations and other applicable State Laws. The Regulations, General Terms and Conditions are incorporated into all state contracts. These regulations and basic information on How To Do Business with the State of Rhode Island are posted on the Rhode Island Vendor Information Program Website (www.purchasing.ri.gov).

4.2A. ARRA SUPPLEMENTAL TERMS AND CONDITIONS. Contracts and sub-awards funded in whole or in part by the American Recovery and Reinvestment Act of 2009, Pub.L.No. 111-5 and any amendments thereto, such contracts and sub-awards, shall be subject to the Supplemental Terms and Conditions For Contracts and Sub-awards Funded in Whole or in Part by the American Recovery and Reinvestment Act of 2009, Pub.L.No. 111-5 and any amendments thereto located on the Division of Purchases website at www.purchasing.ri.gov.

4.3. EQUAL EMPLOYMENT OPPORTUNITY. Compliance certificate and agreement procedures will apply to all awards for supplies or services valued at \$10,000 and more. Minority Business Enterprise policies and procedures, including subcontracting opportunities as described in Title 37 Chapter 14.1, of the Rhode Island General Laws, also apply.

4.4. PERFORMANCE BONDS. Where indicated, successful bidder must furnish a 100% performance bond and labor and payment bond for contracts subject to Title 37 Chapters 12 and 13 of the Rhode Island General Laws. All bonds must be furnished by a surety company authorized to conduct business in the State of Rhode Island. Performance bonds must be submitted within 21 calendar days of the issuance of a tentative notice of award.

4.5. DEFAULT and NON-COMPLIANCE. Default and/or non-compliance with the RIVIP requirements and any other aspects of the award may result in withholding of payment(s), contract termination, debarment, suspension, or any other remedy necessary that is in the best interest of the state.

4.6. COMPLIANCE. Vendor must comply with all applicable federal, state and local laws, regulations and ordinances.

4.7. SPRINKLER IMPAIRMENT AND HOT WORK. The Contractor agrees to comply with the practices of the State's insurance carrier for sprinkler impairment and hot work. Prior to performing any work, the Contractor shall obtain the necessary information for compliance from the Risk Management Office at the Department of Administration or the agency for which work will be performed.

SECTION 5 – CERTIFICATIONS AND DISCLOSURES

ALL CONTRACT AWARDS ARE SUBJECT TO THE FOLLOWING DISCLOSURES & CERTIFICATIONS

Offerors must respond to every disclosure statement.

A person authorized to enter into contracts must sign the offer and attest to the accuracy of all statements.

Indicate Yes (Y) or No (N):

- ☒ N 1. State whether your company, or any owner, stockholder, officer, director, member, partner, or principal thereof, or any subsidiary or affiliated company, has been subject to suspension or debarment by any federal, state, or municipal government agency, or the subject of criminal prosecution, or convicted of a criminal offense within the previous five (5) years. If so, then provide details below.
- ☒ N 2. State whether your company, or any owner, stockholder, officer, director, member, partner, or principal thereof, or any subsidiary or affiliated company, has had any contracts with a federal, state or municipal government agency terminated for any reason within the previous five (5) years. If so, then provide details below.
- ☒ N 3. State whether your company or any owner, stockholder, officer, director, member, partner, or principal thereof, or any subsidiary or affiliated company, has been fined more than \$5000 for violation(s) of Rhode Island environmental laws by the Rhode Island Department of Environmental Management within the previous five (5) years. If so, then provide details below.
- ☒ Y 4. I/we certify that I/we will immediately disclose, in writing, to the Chief Purchasing Officer any potential conflict of interest, which may occur during the course of the engagement authorized pursuant to this contract.
- ☒ Y 5. I/we acknowledge that, in accordance with Chapter 37-2-54(c) of the Rhode Island General Laws "no purchase or contract shall be binding on the state or any agency thereof unless approved by the Department [of Administration] or made under general regulations which the Chief Purchasing Officer may prescribe", including change orders and other types of contracts and under State Purchasing Regulation 8.2.1.1.2, "any alleged oral agreement or arrangements made by a bidder or contractor with any agency or an employee of the Office of Purchases may be disregarded and shall not be binding on the state".
- ☒ Y 6. I/we certify that I/we or my/our firm possesses all licenses required by Federal and State laws and regulations as they pertain to the requirements of the solicitation and offer made herein and shall maintain such required license(s) during the entire course of the contract resulting from the offer contained herein and should my/our license lapse or be suspended, I/we shall immediately inform the Rhode Island State Purchasing Agent in writing of such circumstance.
- ☒ Y 7. I/we certify that I/we will maintain required insurance during the entire course of the contract resulting from the offer contained herein and should my/our insurance lapse or be suspended, I/we shall immediately inform the Rhode Island State Purchasing Agent in writing of such circumstance.
- ☒ Y 8. I/we certify that I/we understand that falsification of any information herein or failure to notify the Rhode Island State Purchasing Agent as certified herein may be grounds for suspension, debarment and/or prosecution for fraud.
- ☒ Y 9. I/we acknowledge that the provisions and procedures set forth in this form apply to any contract arising from this offer.
- ☒ Y 10. I/we acknowledge that I/we understand the State's Purchasing Laws (37-2 of the General Laws of Rhode Island) and Purchasing Regulations and General Terms and Conditions available at the Rhode Island Division of Purchases Website (www.purchasing.ri.gov) apply as the governing conditions for any contract or purchase order I/we may receive from the State of Rhode Island, including the offer contained herein.
- ☒ Y 11. I/we certify that the bidder: (i) is not identified on the General Treasurer's list, created pursuant to R.I. Gen. Laws § 37-2.5-3, as a person or entity engaging in investment activities in Iran described in § 37-2.5-2(b); and (ii) is not engaging in any such investment activities in Iran.
- ☒ Y 12. I/we certify that the above vendor information is correct and complete.

GROUND

Vendor's Signature (Person authorized to enter into contracts; signature must be in ink.) _____ Date 1.29.2014

JAMES HUTCHINSON, PRESIDENT _____ Print

Name and Title of company official signing offer



Lincoln D. Chafee
Governor
Charles J. Fogarty
Director

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

Department of Labor and Training

Center General Complex
1511 Pontiac Avenue
Cranston, RI 02920-4407

Telephone: (401) 462-8000
TTY: Via RI Relay 711

13. Comply with all applicable provisions of RIGL §37-13-1, et. seq;

Any questions or concerns regarding this CONTRACT ADDENDUM should be addressed to the contractor or subcontractor's attorney. Additional Prevailing Wage information may be obtained from the Department of Labor and Training at www.dlt.ri.gov/pw.

CERTIFICATION

I hereby certify that I have reviewed this CONTRACT ADDENDUM and understand my obligations as stated above.

By: [Signature]

Title: PRESIDENT

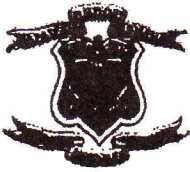
Subscribed and sworn before me this 29 day of Jul, 2014

[Signature]
Notary Public

My commission expires: 5/17/2014

An Equal Opportunity Employer/Program, /Auxiliary aids and services are available upon request to individuals with disabilities.

TTY via RI Relay 711



Request for Quote

Page 1 of 1

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
ONE CAPITOL HILL
PROVIDENCE RI 02908

CREATION DATE : 15-JAN-14
BID NUMBER: 7538372
TITLE: FUME HOOD EVALUATION, CERTIFICATION AND
REPAIR - URI

BUYER: Mosca, Gary
PHONE #: 401-574-8124

BLANKET START : 01-MAR-14
BLANKET END : 31-DEC-16
BID CLOSING DATE AND TIME: 11-FEB-2014 10:00:00

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URI ACCOUNTS PAYABLE
CARLOTTI ADMINISTRATION BLDG
75 LOWER COLLEGE ROAD, SUITE 1
KINGSTON, RI 02881
US

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P

T
O
URI FACILITIES RECEIVING
ATTN: SEE BELOW
SHERMAN BLDG
KINGSTON, RI 02881
US

Requisition Number: 1345825

Line	Description	Quantity	Unit	Unit Price	Total
1	Notice to Vendors: Please complete and submit pricing on sheet labeled ATTACHMENT "A" BLANKET REQUIREMENT: 3/1/2014 - 12/31/2016: Fume Hood Evaluation, Certification and Repair PER ATTACHED SPECIFICATIONS.	1.00	Each		\$94,196.00

Delivery: AS NEEDED

Terms of Payment: NET 30 DAYS

It is the Vendor's responsibility to check and download any and all addenda from the RIVIP. This offer may not be considered unless a signed RIVIP generated Bidder Certification Cover Form is attached and the Unit Price column is completed. The signed Certification Cover Form must be attached to the front of the offer

ATTACHMENT "A"

ITEM NO.	DESCRIPTION	QUANTITY	UOM	UNIT PRICE	EXTENDED PRICE
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GROUP PURCHASING ORGANIZATIONS (GPO):**THE UNIVERSITY OF RHODE ISLAND IS A MEMBER OF THE FOLLOWING:**

- 1) Educational & Institutional Cooperative Purchasing (E&I)
- 2) Provista

IF THIS IS A MULTI-YEAR BID/CONTRACT. CONTINUATION OF THE CONTRACT BEYOND THE INITIAL FISCAL YEAR WILL BE AT THE DISCRETION OF THE UNIVERSITY. TERMINATION MAY BE EFFECTED BY THE UNIVERSITY BASED UPON DETERMINING FACTORS SUCH AS UNSATISFACTORY PERFORMANCE OR THE DETERMINATION BY THE UNIVERSITY TO DISCONTINUE THE GOODS/SERVICES, OR TO REVISE THE SCOPE AND NEED FOR THE TYPE OF GOODS/SERVICES; ALSO MANAGEMENT OWNER DETERMINATIONS THAT MAY PRECLUDE THE NEED FOR GOODS/ SERVICES AND SUBJECT TO AVAILABILITY OF FUNDS.

ATTACHMENT "A"

ITEM NO.	DESCRIPTION	QUANTITY	UOM	UNIT PRICE	EXTENDED PRICE
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DELIVERY AS REQUESTED

BLANKET REQUIREMENTS: 3/1/2014 - 12/31/2016

FUME HOOD TESTING, REPAIR & REPLACEMENT - University of Rhode Island

Fume hood evaluation, certification and minor repair for 300 +/- chemical fume hoods and other hood types located at various locations at the URI Kingston Campus and three (3) satellite campuses: CCE-Shepard's in Providence, Narragansett Bay Campus (NBC), W. Alton Jones, West Greenwich, and additional research vessels. (See attached list)

EVALUATION AND CERTIFICATION

Work will include (but not to be limited to) hood and transport velocity, general conditions of the system (hood, ducts, fan system, and associated equipment) and identify recommended repairs, including cost estimates. Fume hoods are to be certified for testing and repairs according to all required State and Federal Regulations and requirements. (See Chemical Fume Hood Test Specifications below).

All hoods tested are to be documented and a survey summary is to be provided to the Assistant Director of Facilities Services, Maintenance and Repair. The summary should include the following (in an excel spreadsheet):

- Campus
- Date
- Building
- Room
- Sash Parameters
- Measured Face Velocities in FPM (feet per minute) at the following locations:
 - Upper Left
 - Upper Middle
 - Upper Right
 - Lower Left
 - Lower Middle
 - Lower Right
 - Average Face Velocity
- Air flow rates in ml/sec (millimeters per second) and CFPM (cubic feet per minute)
- Class
- Hood Type (VAV/CAV)
- Hazard (Low, High)
- Sash Height
- Survey Date
- Instrumentation Used
- Fan Type (push/pull)
- Fan Manufacturer/Model Number
- Fan Age Estimate
- General Condition Description
- Flow Monitor (Calibrated, NA)
- Smoke Test Results
- Tracer Test Results (high hazard hoods only)
- Pass/Fail

Fume Hood testing and certification to be done on a per unit (hood) cost (Low Hazard or High Hazard).

BID A PRICE FOR THE FOLLOWING PERIOD - 3/1/2014 - 12/31/2014

1	Initial Testing - Low Hazard Chemical Fume Hoods	1	Each	\$ <u>60.00</u>	\$ <u>60.00</u>
2	Initial Testing - High Hazard Chemical Fume Hoods	1	Each	\$ <u>450.00</u>	\$ <u>450.00</u>

BID A PRICE FOR THE FOLLOWING PERIOD - 1/1/2015 - 12/31/2015

3	Annual Certification - Low Hazard Chemical Fume Hoods	1	Each	\$ <u>62.00</u>	\$ <u>62.00</u>
4	Annual Certification - High Hazard Chemical Fume Hoods	1	Each	\$ <u>452.00</u>	\$ <u>452.00</u>

BID A PRICE FOR THE FOLLOWING PERIOD - 1/1/2016 - 12/31/2016

5	Annual Certification - Low Hazard Chemical Fume Hoods	1	Each	\$ <u>62.00</u>	\$ <u>62.00</u>
6	Annual Certification - High Hazard Chemical Fume Hoods	1	Each	\$ <u>460.00</u>	\$ <u>460.00</u>

MINOR REPAIRS

ATTACHMENT "A"

ITEM NO.	DESCRIPTION	QUANTITY	UOM	UNIT PRICE	EXTENDED PRICE
	Minor repairs will include (but not limited to) balancing, adjusting fan speeds and belts, cabinet repairs and other related work as required. Provide price per hour for repair work. Minor repair work is to be reviewed with and approved by URI staff before work is started.				
	Overtime rate applies from 5:00 PM to 7:30 AM plus Saturday, Sunday and Holidays				
	BID A PRICE FOR THE FOLLOWING PERIOD - 3/1/2014 - 12/31/2014				
7	Hourly Rate on Site - Technician	300	Hours	\$ <u>62.00</u>	\$ <u>18,600</u>
8	Hourly Rate on Site - Licensed Electrician	50	Hours	\$ <u>85.00</u>	\$ <u>4,250</u>
9	Overtime Rate on Site - Technician	50	Hours	\$ <u>62.00</u>	\$ <u>3,100</u>
10	Overtime Rate on Site - Licensed Electrician	50	Hours	\$ <u>85.00</u>	\$ <u>4,250</u>
	BID A PRICE FOR THE FOLLOWING PERIOD - 1/1/2015 - 12/31/2015				
11	Hourly Rate on Site - Technician	300	Hours	\$ <u>64.00</u>	\$ <u>19,200</u>
12	Hourly Rate on Site - Licensed Electrician	50	Hours	\$ <u>85.00</u>	\$ <u>4,250</u>
13	Overtime Rate on Site - Technician	50	Hours	\$ <u>64.00</u>	\$ <u>3,200</u>
14	Overtime Rate on Site - Licensed Electrician	50	Hours	\$ <u>85.00</u>	\$ <u>4,250</u>
	BID A PRICE FOR THE FOLLOWING PERIOD - 1/1/2016 - 12/31/2016				
15	Hourly Rate on Site - Technician	300	Hours	\$ <u>65.00</u>	\$ <u>19,500</u>
16	Hourly Rate on Site - Licensed Electrician	50	Hours	\$ <u>88.00</u>	\$ <u>4,400</u>
17	Overtime Rate on Site - Technician	50	Hours	\$ <u>65.00</u>	\$ <u>3,250</u>
18	Overtime Rate on Site - Licensed Electrician	50	Hours	\$ <u>88.00</u>	\$ <u>4,400</u>
19	Provide a discount % off list price on parts/materials 3/1/2014 - 12/31/2016:	<u>10</u>	Percent		

GENERAL NOTES:

Hourly rates are to start on the job, travel time will not be accepted. The vendor shall start and end each work session at the Maintenance Office at each facility, signing in and out (use URI time clock as required). **Contractor shall respond to requests for fume hood repairs within one business day.** Materials are to be provided at a discount off list price. List Price is not acceptable. Vendor will provide copies of Invoices or evidence of list price if requested to show proof of parts cost. Final Invoices to be submitted to URI within 2 weeks of the completion date.

With your bid, please provide documentation of training, certifications, etc. to demonstrate that your employees are qualified to perform this work in the state of RI.

Chemical Fume Hood Test Specifications**Initial Testing - Low Hazard Chemical Fume Hoods**

Tests to include field tests specified in AIHA/ANSI Z9.5 and ASHRAE 110, including but not limited to:

- Face velocity profile
- Airflow smoke patterns (local flow visualization challenge and large-volume flow visualization challenge)
- Cross draft air flow testing
- Verification of proper operation of continuous flow monitoring or other monitoring devices (if installed)
- Calibration of fume hood monitors (if installed)
- Inspection of physical condition.

Initial - High Hazard Chemical Fume Hoods

Tests to include field tests specified in AIHA/ANSI Z9.5 and ASHRAE 110, including but not limited to,

- Face velocity profile
- Airflow smoke patterns (local flow visualization challenge and large-volume flow visualization challenge)
- Cross draft air flow testing
- Verification of proper operation of continuous flow monitoring or other monitoring devices (if installed)
- Calibration of fume hood monitors (if installed)
- Inspection of physical condition
- Measurement of tracer gas contaminant

Annual Certification - Chemical Fume Hoods

Tests to include field tests specified in AIHA/ANSI Z9.5 and ASHRAE 110, including but not limited to,

ATTACHMENT "A"

ITEM NO.	DESCRIPTION	QUANTITY	UOM	UNIT PRICE	EXTENDED PRICE
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- Face velocity profile
- Airflow smoke patterns (local flow visualization challenge and large-volume flow visualization challenge)
- Verification of proper operation of continuous flow monitoring or other monitoring devices (if installed)
- Calibration of fume hood monitors (if installed)
- Inspection of physical condition.

Testing Conditions

- Perform hood test when the building HVAC system is operating in the "normal" mode. Confirm with URI staff
- Supply air is functioning normally
- All other hoods in the room halfway open
- Lab doors closed

Passing ConditionsFace Velocity

- Variable air volume (VAV)- 90-110 fpm at full and half (14") sash height with no single measurement +/- 20% of average
- Low flow hoods -- +/- 10% of flow rate for successful tracer test (if data is available) and no lower than 60 fpm at full and half (14") sash height
- Constant air volume (CAV) - 90-110 fpm at half (14") sash height with no single measurement +/- 20% of average

Airflow Visualization

- All smoke must be contained within and exhausted from the hood.

Tracer Gas Containment

As installed (AI) containment results for the average 5 minute concentration shall be less than or equal to 0.10 ppm at a tracer gas release rate of 4.0 liters per minute

Flow Monitor

- Reading within 10% of average flow velocity

Equipment

- The fume hood certifying agency (vendor) will provide all necessary tools, equipment and supplies required to perform the services listed above.

Deliverables

Upon successful completion of the testing and certification, the vendor must affix a "Fume Hood Inspection" tag that indicates the test date, average inflow rate, sash height, due date for next certification, test report number and service technician name.

Within seven days, provide a test report identifying all tests performed, test results and any adjustments or repairs necessary. Include equipment calibration and technician certification data in the report.

Approximate QuantitiesInitial Testing

- Low Hazard Chemical Fume Hoods - 280
- High Hazard Chemical Fume Hoods - 20
- Other Safety Hoods - 10

Annual Certification

- Chemical Fume Hoods - 300
- Other Safety Hoods - 10